

Application No. 09/526,579
Amendment "A" dated September 30, 2004
Reply to Office Action mailed June 30, 2004

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-10. (Cancelled)

11. (Currently Amended) In a system capable of receiving broadcast data over one or more television broadcasts, a method for presenting broadcast data that is embedded in the one or more television broadcasts to an application, the method comprising the steps of:

receiving a request from an application for broadcast data, the request specifying a type of the requested data, a video port from which the requested data should be received, and any filtering that should be performed on the data;

capturing the broadcast data in the from one or more television broadcasts that are received at one or more video ports by a one or more respective broadcast data sources, each of the broadcast data sources comprising a driver having means for decoding the broadcast data;

delivering the captured broadcast data to a miniport, the miniport comprising means for differentiating and separating the requested broadcast data from the captured broadcast data, the miniport further comprising means for differentiating between compliant broadcast data and non-compliant broadcast data and means for encapsulating non-compliant broadcast data with appropriate headers so as to be compliant;

transferring the broadcast data from the miniport to a common application interface;

retrieving the broadcast data from the common application interface by a presenter, the presenter comprising means for obtaining the broadcast data from both a common application interface comprising Winsock and a RawData interface; and

preparing the broadcast data, by the presenter, for presentation to the application, as specified by the application.

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12. (Original) A method as defined in claim 11, wherein the miniport performs the steps of:

differentiating broadcast data that complies with a protocol from broadcast data that does not comply with the protocol; and

encapsulating the broadcast data that does not comply with the protocol with headers such that the broadcast data complies with the protocol.

13. (Original) A method as defined in claim 12, wherein the protocol is UDP/IP.

14. (Original) A method as defined in claim 11, wherein the step of transferring the broadcast data further comprises the steps of:

transferring the broadcast data from the miniport to NDIS;

transferring the broadcast data from NDIS to a protocol; and

transferring the broadcast data from the protocol to the common application interface.

15. (Original) A method as defined in claim 11, wherein the common application interface is Winsock.

16. (Original) A method as defined in claim 11, wherein the common application interface is a RawData interface.

17. (Original) A method as defined in claim 11, wherein the step of preparing the broadcast data further comprises at least one of the steps of:

demultiplexing the broadcast data;

aggregating the broadcast data;

instance filtering the broadcast data;

duplicate filtering the broadcast data; and

formatting the broadcast data for the application.

18. (Cancelled).

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19. (Original) A method as defined in claim 11, wherein the step of capturing the broadcast data further comprises the step of enabling the broadcast data source.

20-30. (Cancelled).

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31. (Currently Amended) In a system capable of receiving television broadcasts having broadcast data, a method for collecting broadcast data from one or more broadcast data sources, the method comprising ~~the steps of:~~

calling, by ~~the one or more~~ broadcast data ~~sources~~sources, a function of a broadcast data source interface ~~having one or more parameters~~, wherein the broadcast data source interface permits the one or more broadcast data sources to interface with ~~one or more~~ a broadcast data source miniports, wherein each of the one or more broadcast data sources comprises a driver having means for receiving and decoding the broadcast data that is embedded within television broadcasting and that is received at one or more video ports by the one or more respective broadcast data sources, and wherein the miniport comprises:

means for differentiating and separating broadcast data requested by one or more applications from the broadcast data captured by the broadcast data source,

means for differentiating between compliant broadcast data and non-compliant broadcast data, and

means for encapsulating non-compliant broadcast data with appropriate headers so as to be compliant; and

executing the function by the broadcast data source interface.

32. (Currently Amended) A method as defined in claim 31, wherein the function comprises ~~Register~~ registering the one or more broadcast data sources with the miniport ~~and the one or more parameters comprise ApplicationField, SelectRoutine, VideoPort, DataSource, and SourcingHandlePointer.~~

33. (Currently Amended) A method as defined in claim 31, wherein the function comprises ~~DeRegister~~ and the one or more parameters comprise ~~SourcingHandle~~ deregistering the one or more broadcast data sources with the miniport.

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34. (Currently Amended) A method as defined in claim 31, wherein the function comprises ~~Indicate and the one or more parameters comprise SourcingHandle, StreamID, Indication, DataLength, NumberFragments, Fragment0Length, and Fragment0Location~~ indicating reception of the broadcast data and even notifications.

35. (Currently Amended) ~~In a system capable of receiving television broadcasts having broadcast data, a method for presenting the broadcast data to one or more applications, the method comprising the steps of:~~ A method as recited in claim 31, further comprising:

calling, by the one or more applications, a function having one or more parameters of a presenter interface, wherein the presenter interface provides the one or more applications access to a broadcast data presenter, the broadcast data presenter being comprising means foreable of retrieving the requested broadcast data from a common application interface; and

executing the function having the one or more parameters of the presenter interface by the presenter interface.

36. (Currently Amended) A method as defined in claim 35, wherein the function having one or more parameters of the presenter interface comprises the one or more applications selecting and enabling a particular class or type of broadcast data that is desired. ~~SelectData and the one or more parameters comprise ApplicationField, PresentRoutine, VideoPort, DataType, InstanceFilter, AlternateMulticastIP, AlternateUDPPort, and PresenterHandlePointer.~~

37. (Currently Amended) A method as defined in claim 35, wherein the function having one or more parameters of the presenter interface comprises the one or more applications indicating to the broadcast data presenter that the particular class or type of broadcast data is no longer desired. ~~DeselectData and the one or more parameters comprise PresenterHandler.~~

38. (Currently Amended) A method as defined in claim 35, wherein the function having one or more parameters of the presenter interface comprises the one or more applications returning the broadcast data to the broadcast data presenter. ~~ReleaseData and the one or more parameters comprise PresenterHandle and DeliveryLocation.~~

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39. (Currently Amended) ~~In a system capable of receiving television broadcasts having broadcast data, a method for providing the broadcast data to one or more applications or a presenter, the method comprising the steps of:~~ A method as recited in claim 35, further comprising:

calling, by the one or more applications or the presenter, a function having one or more parameters of a RawData interface, wherein the RawData interface permits the one or more applications or the presenter to interface with a RawData module, wherein the RawData module comprises means for obtaining the requested data from the miniport in a raw format and for presenting the requested data to the one or more applications without the use of NDIS; and

executing the function having the one or more parameters of the RawData interface by the RawData interface.

40. (Currently Amended) A method as defined in claim 39, wherein the function having one or more parameters of the RawData interface comprises the one or more applications specifying a particular class or type of broadcast data that is desired. ~~SelectRawData and the one or more parameters comprise ApplicationField, RawDataCallbackRoutine, VideoPort, Datatype, InstanceInformation, Options, and RawDataHandlePointer.~~

41. (Currently Amended) A method as defined in claim ~~39~~40, wherein the function the RawData interface comprises the one or more applications specifying that the particular class or type of broadcast data is no longer desired. ~~SelectRawData and the one or more parameters comprise RawDataHandle.~~

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42. (Currently Amended) A computer program product for implementing, in a system capable of receiving television broadcasts having broadcast data, a method for collecting the broadcast data from one or more broadcast data sources, the computer program product comprising:

~~a one or more~~ computer readable ~~mediamedium~~ carrying computer executable instructions for implementing the method, wherein the computer executable instructions comprise program code means for:

calling, by ~~a one or more~~ broadcast data ~~source~~sources, a function of a broadcast data source interface, ~~the function having one or more parameters~~, wherein the broadcast data source ~~interface~~ ~~interfaces~~ permits the one or more broadcast data sources to interface with one or more broadcast data source ~~miniports~~, wherein each of the one or more broadcast data sources comprises a driver having means for receiving and decoding the broadcast data that is embedded within television broadcasting and that is received at one or more video ports by the one or more respective broadcast data sources, and wherein the miniport comprises:

means for differentiating and separating broadcast data requested by one or more applications from the broadcast data captured by the broadcast data source,

means for differentiating between compliant broadcast data and non-compliant broadcast data, and

means for encapsulating non-compliant broadcast data with appropriate headers so as to be compliant; and

executing the function by the broadcast data source interface.

43. (Currently Amended) A computer program product as in claim 42, wherein the function comprises registering the one or more broadcast data sources with the miniport~~register~~ and ~~the one or more parameters comprise ApplicationField, SelectRoutine, VideoPort, DataSource, and SourcingHandlePointer.~~

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44. (Currently Amended) A computer program product as in claim 42, wherein the function comprises deregistering the one or more broadcast data sources with the ~~miniportderegister~~ and the one or more parameters comprise ~~SourcingHandle~~.

45. (Currently Amended) A computer program product as in claim 42, wherein the function comprises indicating reception of the broadcast data and even notifications~~indicate and the one or more parameters comprise SourcingHandle, StreamID, Indication, DataLength, NumberFragments, Fragment0Length, and Fragment0Location.~~

46. (Currently Amended) A computer program product as recited in claim 42,
wherein the method further comprises~~for implementing, in a system capable of receiving television broadcasts having broadcast data, a method for presenting the broadcast data to one or more applications, the computer program product comprising:~~

~~a computer readable medium carrying computer executable instructions for implementing the method, wherein the computer executable instructions comprise program code means for:~~

~~calling, by an~~the one or more applications~~application, a function having one or more parameters of a presenter interface~~of a presenter interface, the function having one or more parameters, wherein the presenter interface provides the one or more applications with access to broadcast data prepared by a broadcast data presenter, the broadcast data presenter comprising means for retrieving the requested broadcast data from a common application interface; and
executing the function having the one or more parameters of the presenter interface.

47. (Currently Amended) A computer program product as in claim 46, wherein the function having one or more parameters of the presenter interface comprises the one or more applications selecting and enabling a particular class or type of broadcast data that is
desired~~SelectData and the one or more parameters comprise ApplicationField, PresentRoutine, VideoPort, DataType, InstanceFilter, AlternateMulticastIP, AlternateUDPPort, and PresenterHandlePointer.~~

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48. (Currently Amended) A computer program product as in claim 46, wherein the function having one or more parameters of the presenter interface comprises the one or more applications indicating to the broadcast data presenter that the particular class or type of broadcast data is no longer desired. ~~DeselectData and the one or more parameters comprise PresenterHandler.~~

49. (Currently Amended) A computer program product as in claim 46, wherein the function having one or more parameters of the presenter interface comprises the one or more applications returning the broadcast data to the broadcast data presenter. ~~ReleaseData and the one or more parameters comprise PresenterHandle and DeliveryLocation.~~

50. (Cancelled).

51. (New) A computer program product as recited in claim 42, wherein the method further comprises:

calling, by the one or more applications or the presenter, a function having one or more parameters of a RawData interface, wherein the RawData interface permits the one or more applications or the presenter to interface with a RawData module, wherein the RawData module comprises means for obtaining the requested data from the miniport in a raw format and for presenting the requested data to the one or more applications without the use of NDIS; and

executing the function having the one or more parameters of the RawData interface.

52. (New) A method as defined in claim 51, wherein the function having one or more parameters of the RawData interface comprises the one or more applications specifying a particular class or type of broadcast data that is desired..

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53. (New) A method as defined in claim 52, wherein the function the RawData interface comprises the one or more applications specifying that the particular class or type of broadcast data is no longer desired.

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54. (New) A computer program product for implementing, in a system capable of receiving television broadcasts, a method for presenting broadcast data that is embedded in the one or more television broadcasts to an application, the computer program product comprising:

one or more computer readable media carrying computer executable instructions for implementing the method, wherein the computer executable instructions comprise program code means for:

receiving a request from an application for broadcast data, the request specifying a type of the requested data, a video port from which the requested data should be received, and any filtering that should be performed on the data;

capturing the broadcast data from one or more television broadcasts that are received at one or more video ports by one or more respective broadcast data sources, each of the broadcast data sources comprising a driver having means for decoding the broadcast data;

delivering the captured broadcast data to a miniport, the miniport comprising means for differentiating and separating the requested broadcast data from the captured broadcast data, the miniport further comprising means for differentiating between compliant broadcast data and non-compliant broadcast data and means for encapsulating non-compliant broadcast data with appropriate headers so as to be compliant;

transferring the broadcast data from the miniport to a common application interface;

retrieving the broadcast data from the common application interface by a presenter, the presenter comprising means for obtaining the broadcast data from both a common application interface comprising Winsock and a RawData interface; and

preparing the broadcast data, by the presenter, for presentation to the application, as specified by the application.

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55. (New) A computer program product as defined in claim 54, wherein the miniport performs:

differentiating broadcast data that complies with a protocol from broadcast data that does not comply with the protocol; and

encapsulating the broadcast data that does not comply with the protocol with headers such that the broadcast data complies with the protocol.

56. (New) A computer program product as defined in claim 55, wherein the protocol is UDP/IP.

57. (New) A computer program product as defined in claim 54, wherein transferring the broadcast data comprises:

transferring the broadcast data from the miniport to NDIS;

transferring the broadcast data from NDIS to a protocol; and

transferring the broadcast data from the protocol to the common application interface.

58. (New) A computer program product as defined in claim 54, wherein the common application interface is Winsock.

59. (New) A computer program product as defined in claim 54, wherein the common application interface is a RawData interface.

60. (New) A computer program product as defined in claim 54, wherein preparing the broadcast data comprises at least one of:

demultiplexing the broadcast data;

aggregating the broadcast data;

instance filtering the broadcast data;

duplicate filtering the broadcast data; and

formatting the broadcast data for the application.

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61. (New) A computer program product as defined in claim 54, wherein capturing the broadcast data comprises enabling the broadcast data source.